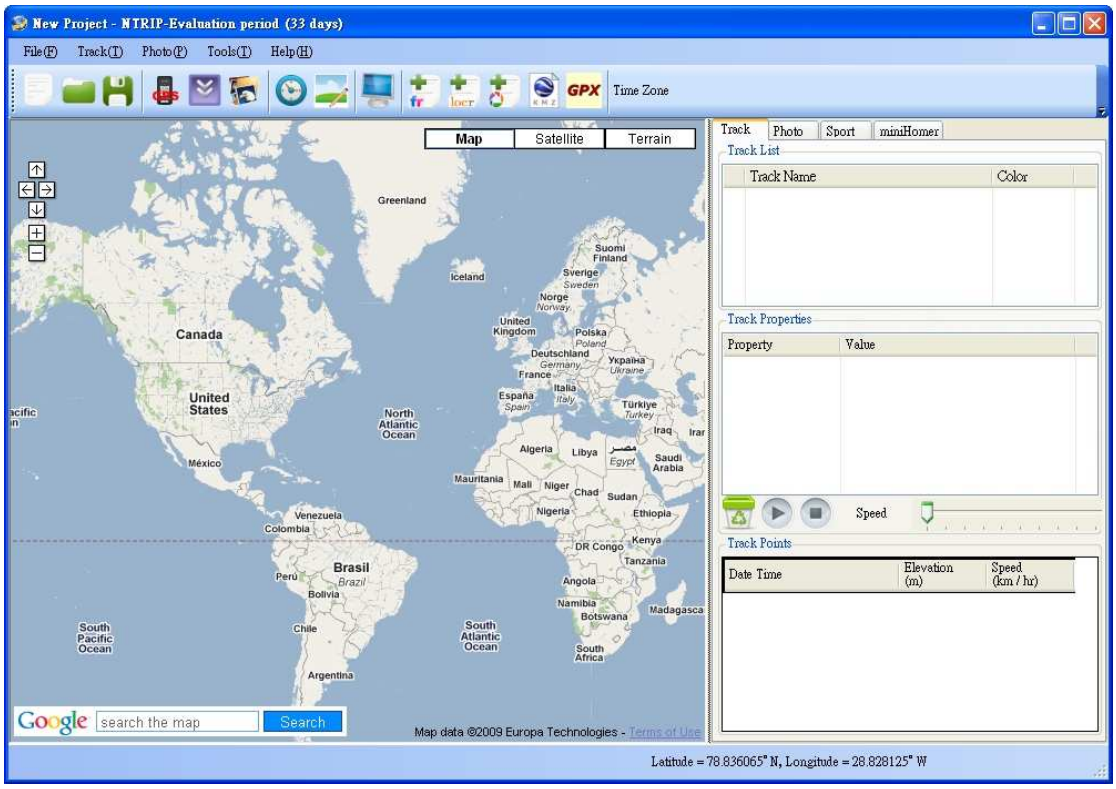
ntrip™ User's Guide



ntrip is an easy to use shareware that turns NAVIN *mini*Homer into a GPS Guider and a GPS Data Logger device.

With current turn-by-turn moving map PND navigation devices, the users gradually cease to build up sense of road and direction of unfamiliar territory as they rely more and more on the GPS turn-by-turn navigational guidance. The *mini*Homer GPS Guider on the other hand provides users with destination direction and distance information, the users still have the fun of deciding which road to take and which turn to make, building up a sense of the geo-spatial relationships at the same time.

The *mini*Homer GPS Guider function helps users get to the destination but with the fun of making choices.

Enabled with following feature, the *mini*Homer is turned into a GPS Guider device:

a. Setting of the 5 return locations in the *mini*Homer using manual input of destination latitude/longitude coordinates.
b. Setting of the 5 return locations in the *mini*Homer by clicking destination locations on the map.

Enabled with following feature, the *mini*Homer is turned into a GPS Data Logger device:

a. Record up to 165,000 points of GPS data; each data containing position, velocity, and time information.

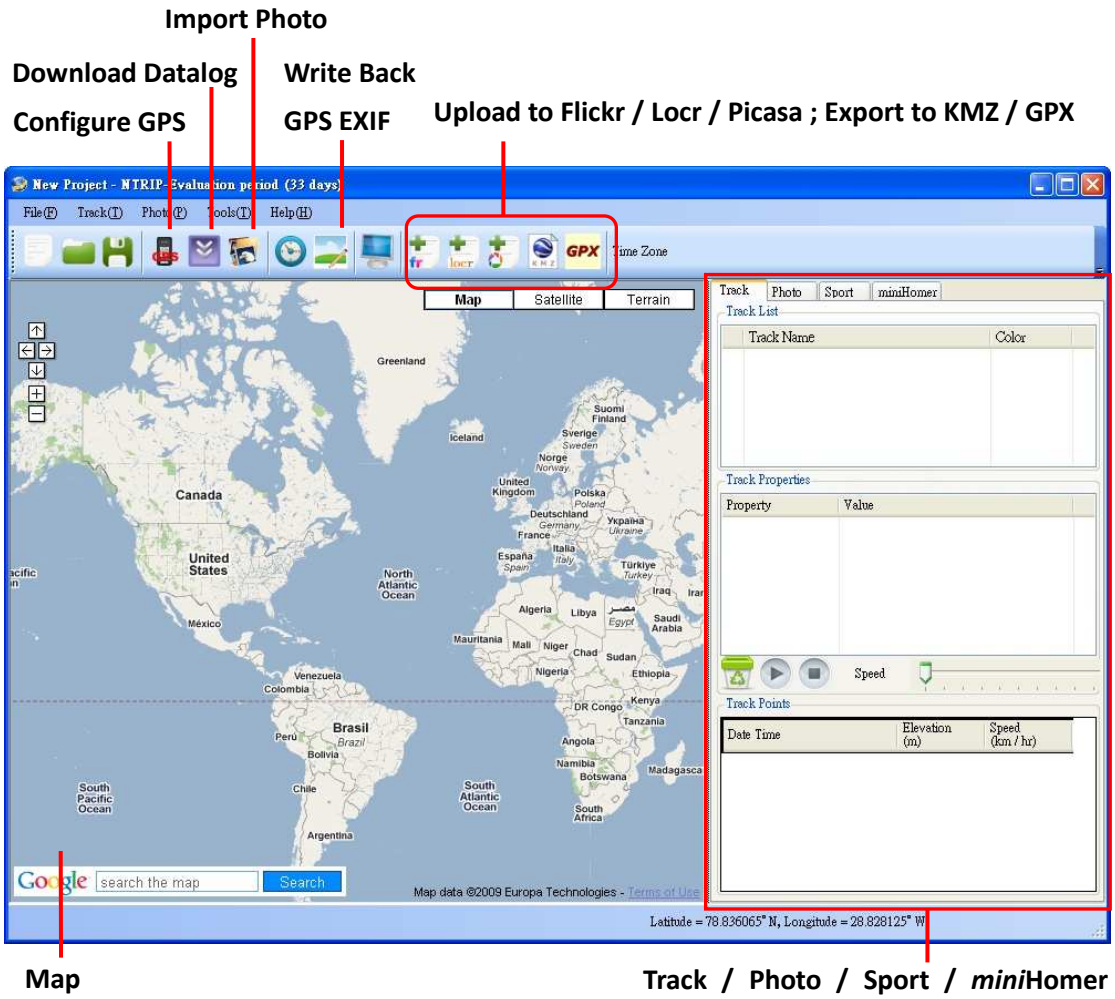
Using the *mini*Homer as GPS Data Logger while touring a foreign city taking photos, the GPS logger data can later be used to geo-tag the photos, and share the traversed trip route with friends.

Using the *mini*Homer as GPS Data Logger for outdoor fitness training such as jogging, the GPS logger data can be analyzed for maximum speed, average speed, jogged distance. The speed profile and statistics could be used to improve fitness training.

With the *mini*Homer recorded GPS data, **ntrip** enables user to perform following functions:

a. Import logged GPS data to show on map.
b. Export the GPS logger data in popular KML, KMZ, GPX, CSV, NMEA formats, facilitating usage of the GPS logger data with other software.
c. Geo-tag photo images.
d. Ease export of photo images and GPS logger data to Picasa, Locr and Flickr to share with friends.
e. Facilitate showing of photo images on the map at the location where the photo is taken.
f. Analyze maximum/minimum/average speed; climb/descend height, and total time in a trip.

VIEWS & FUNCTIONS



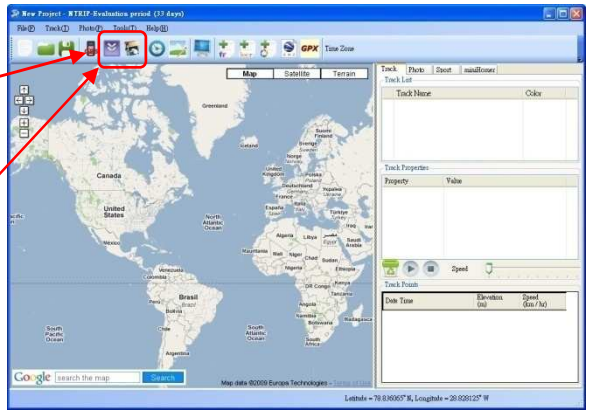
QUICK GUIDE

Get Ready for Use

1. Connect your GPS device to PC.
2. Configure GPS.

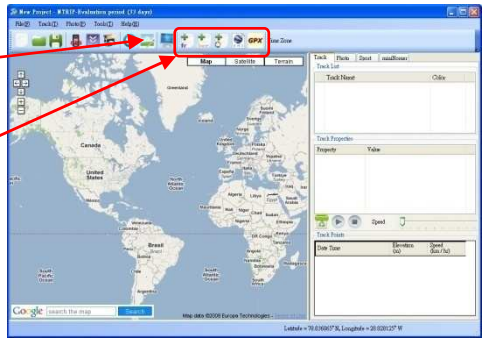
Import Datalog and Photos

1. Download Datalog.
2. Import Photo.



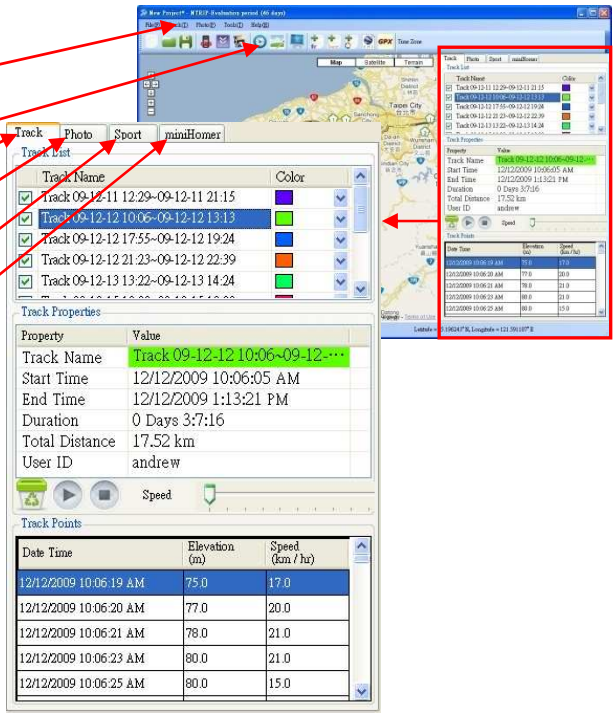
Share Datalog and Photos

1. Write Back GPS EXIF.
2. Upload to Flickr.
3. Upload to Locr.
4. Upload to Picasa.
5. Export to KMZ.
6. Export to GPX.



Helpful Function

1. Merge Track.
2. Shift Time of Photos.
3. Track details.
4. Photo details.
5. Sport Statistics.
6. *mini*Homer.



BEFORE USE

Hardware and Software Setup

1. Download USB driver from **ntrip** website and install the USB driver on your Windows PC.
2. Download **ntrip** shareware from **ntrip** website and install it on your Windows PC: unzip the files into a directory, run ntrip setup program from the directory.
3. Connect *mini*Homer to PC using a standard USB cable. *Note that the USB cable accompanying miniHomer is a special 2-wire USB charger cable, not a standard USB cable. You need another standard USB cable for use with **ntrip**; this USB cable can be used both for data transfer and charging miniHomer.*
4. Turn on *mini*Homer.
5. Now your *mini*Homer is ready for use with **ntrip**.
6. When planning to use miniHomer to later geo-tag photo or uploading trip data with photo to photo-sharing sites, be sure to double check that the camera date and time function are correct beforehand.

HARDWARE OPERATING PROCEDURE

1. When connecting miniHomer to PC for configuration or downloading of trip data, always have miniHomer powered off first before connecting to a already turned on PC, start ntrip, then turn on miniHomer. Having miniHomer already powered on connecting to PC may sometimes result in flying mouse or unscrollable map within ntrip.

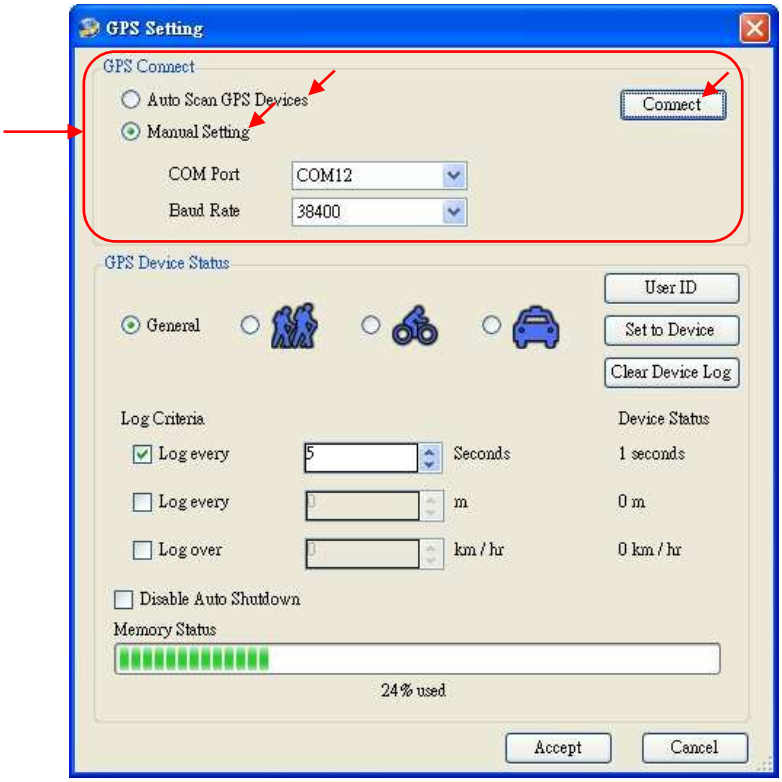
USING ntrip

Setup Configuration

1. You can perform setup configuration by clicking *Configure GPS* button.

2. If you do not know what is the correct COM port for connecting *mini*Homer, **ntrip** can search automatically by selecting *Auto Scan GPS Devices* and clicking on *Connect* button.

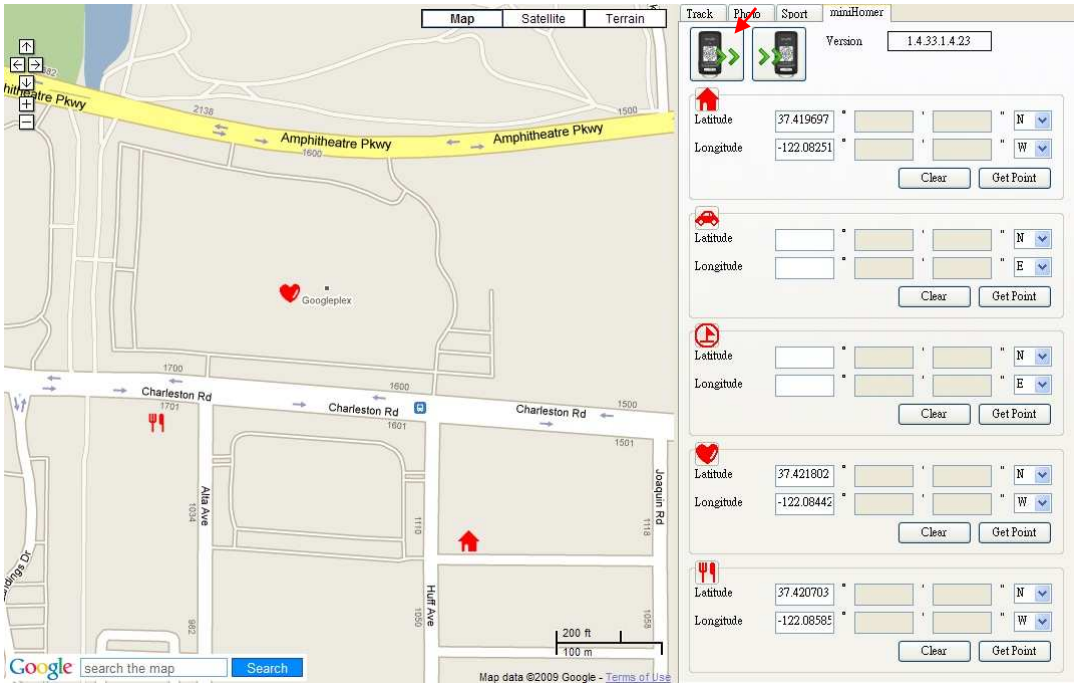
3. If you know the correct COM port, you can choose *Manual Setting* and click on *Connect* button. The baud rate for *mini*Homer is 38400.



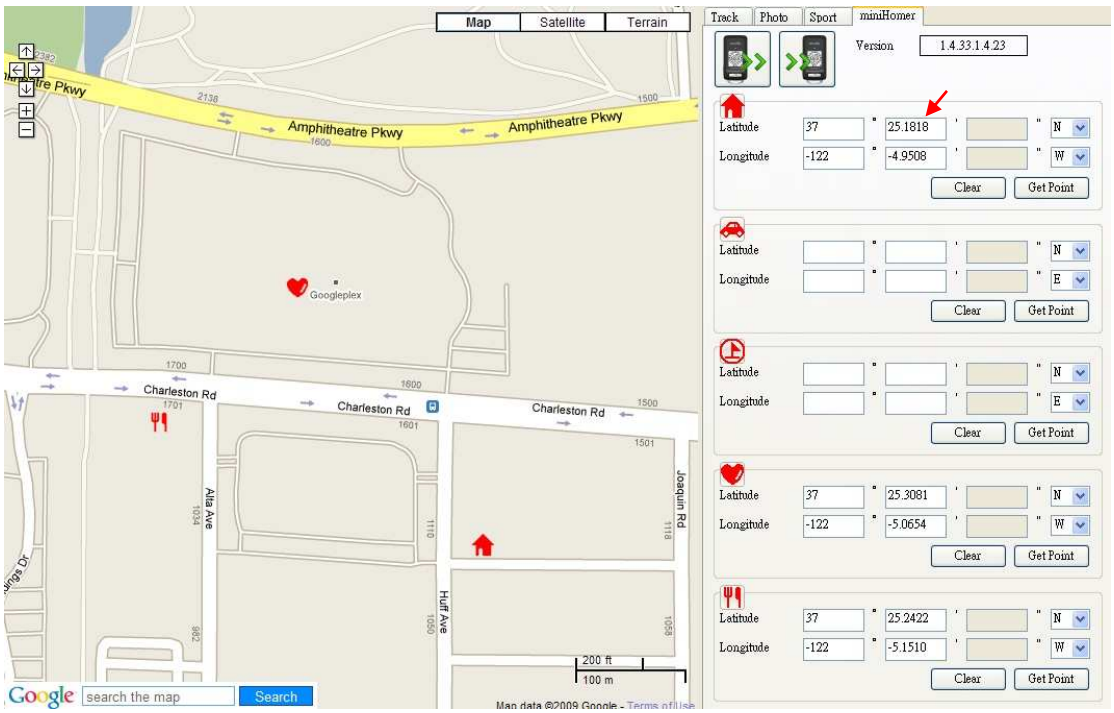
Retrieving the Marked Locations From *mini*Homer

1. You can retrieve the marked locations from *mini*Homer by clicking on the *Read from miniHomer* button, and the location icons are displayed on the map with latitude/longitude shown. You can change units for showing latitude/longitude by selecting *System Setting*. You can retrieve and share the marked location coordinates with your friends if the locations are of interest.

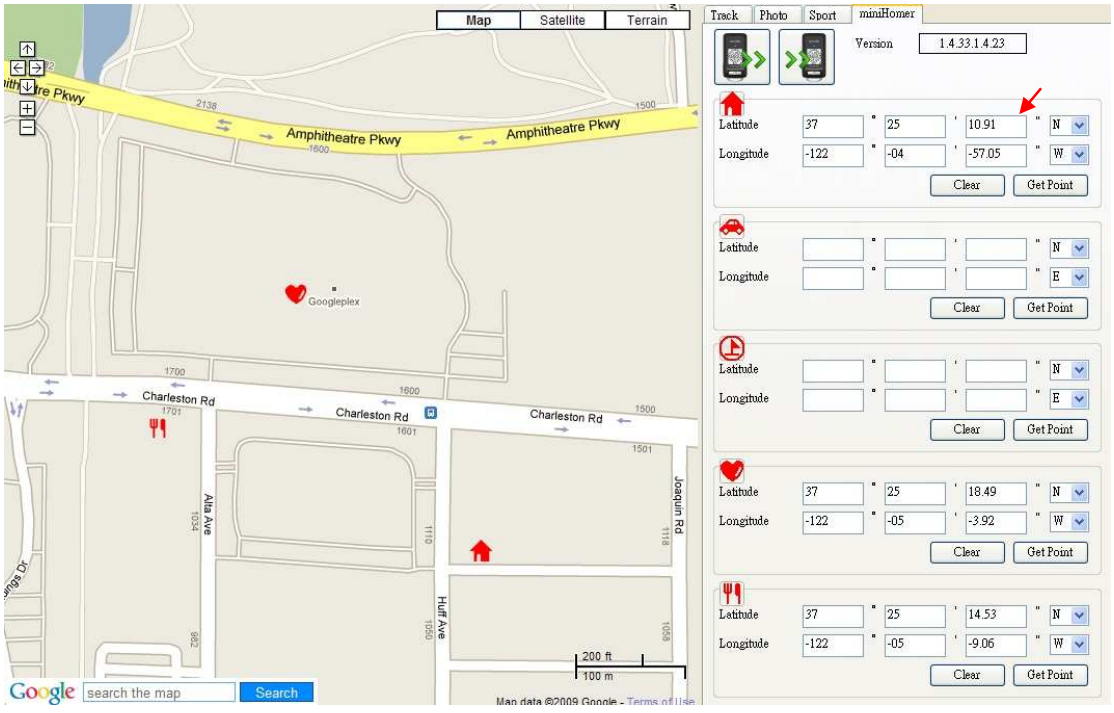
Decimal Degrees Format Display



Degrees, Decimal Minutes Display

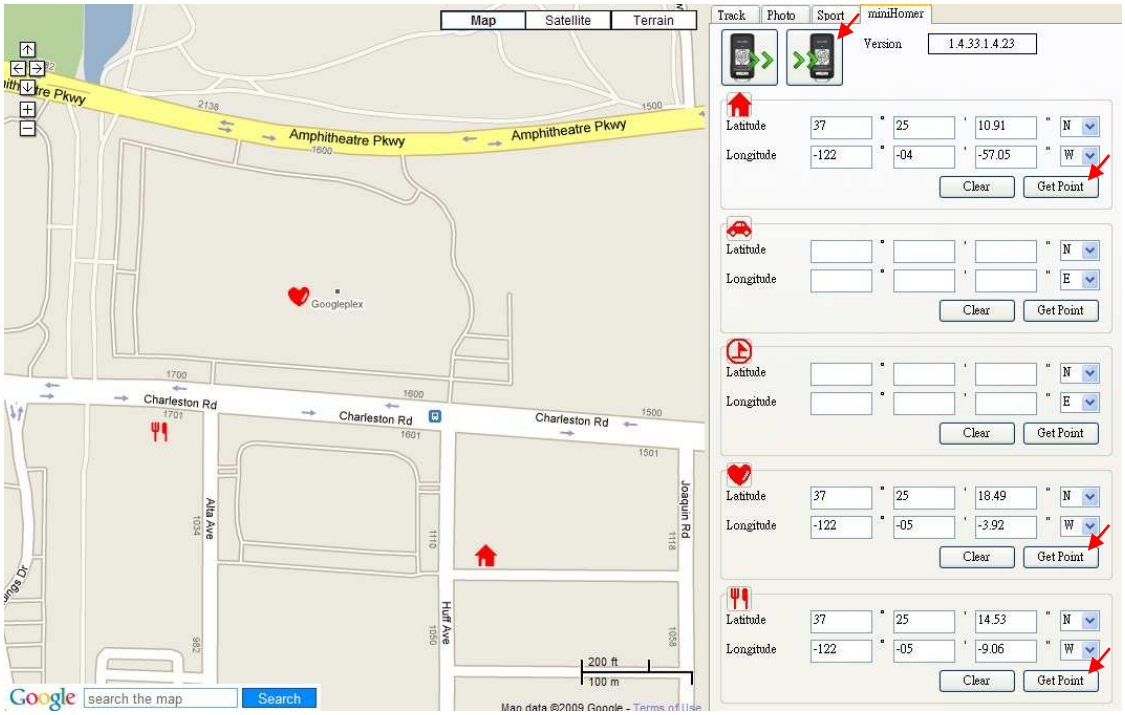


Degrees, Minutes, Seconds Display



Using *mini*Homer as a Guider and Setting the Location Icons

1. To use *mini*Homer as a guiding device, you can either enter the latitide/longitude coordinates manually, or by clicking on *Get Point* buttons of any location icon and then click on the map to select location of interest, latitude and longitude of the selected location is displayed. When entering the coordinates, the location icon will be shown on the map when the Enter key on the keyboard is pressed. The coordinates are saved to *mini*Homer when you click on *Write into miniHomer* button. A location can be searched and looked up using the Google search box on the lower left.

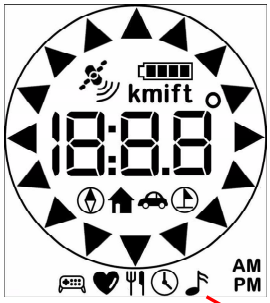


2. You can remove the selected location by clicking on *Clear* button.

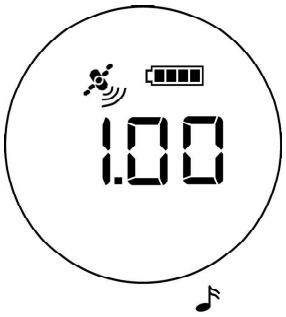
When retrieving marked location data from miniHomer, writing destination data to miniHomer, connecting to miniHomer, or downloading logger data, the miniHomer firmware version number will be read and be displayed on the upper right.

Enable or Disable *mini*Homer Data Logging

After first time connecting *mini*Homer with **ntrip**, *mini*Homer will be enabled with the GPS data logger functionality. Up to 165,000 points of user position, velocity, time information can be recorded within the *mini*Homer device for later retrieval by **ntrip**. The overall *mini*Homer available icons will now be:



1. To enable or disable data logging, click Power/Mode key to select the data logger icon.
2. Press and hold Mark key, wait until the circle of direction arrows shows up and then release Mark key.
3. After the circle of direction arrows disappear, if the data logger icon is flashing, then data logging is enabled. If the data logger icon is not flashing, then data logging is disabled. Enable or disable of data logging function is toggled by performing step 2.
4. The number displayed shows percentage of the logger memory left.



5. If data logging is enabled with data logger icon flashing, the data logger icon will continue to appear and flash when clicking Power/Mode key to select the other modes.
6. If data logging is enabled, auto shutdown is performed when all the below conditions occur:
    a. No key pressed for 10 minutes
    b. No position fix for 10 minutes
    c. No heading movement over 10 degrees for 10 minutes.

7. Data logging criteria is set using **ntrip** under *Configure GPS* button.

Configuring Data Logger Criteria

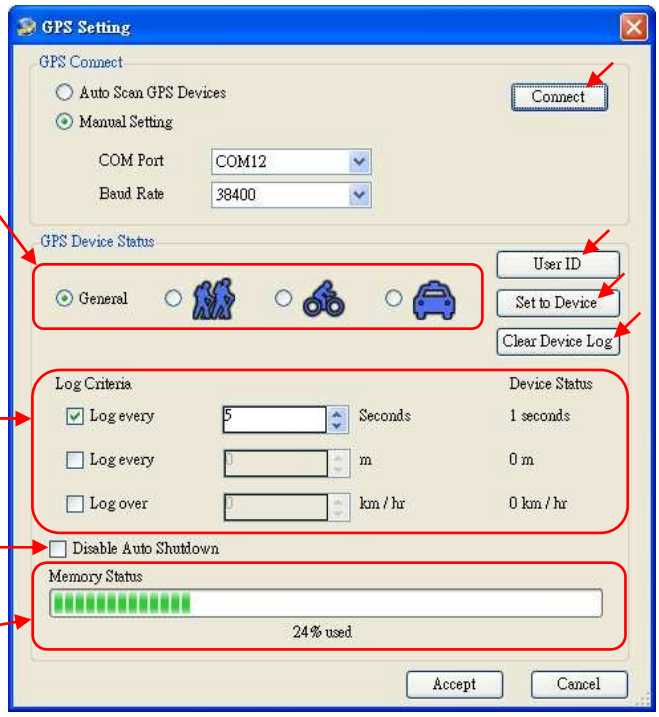
1. You can perform Data Logger setup configuration by first clicking *Configure GPS* button.

2. Then click the *Connect* button to connect to the *mini*Homer.

3. You can choose an appropriate movement mode for your *mini*Homer to improve accuracy of data logging.

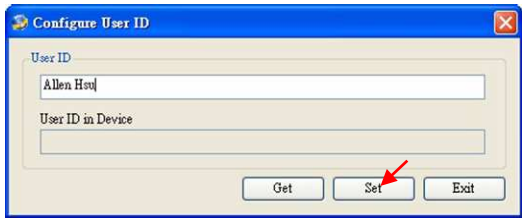
4. You can adjust the logging criteria here. The conditions are ANDed together. Click on *Set to Device* button to set the criteria to the *mini*Homer.

5. You can check data logger memory usage of your GPS device.

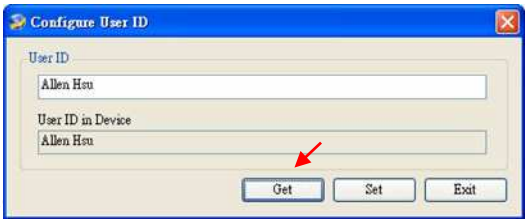


6. You can erase all the GPS logger data by clicking on *Clear Device Log* button.

7. You can *configure User ID* and write into your *mini*Homer by clicking the *Set* button. Click on *Get* button to retrieve User ID from the device.



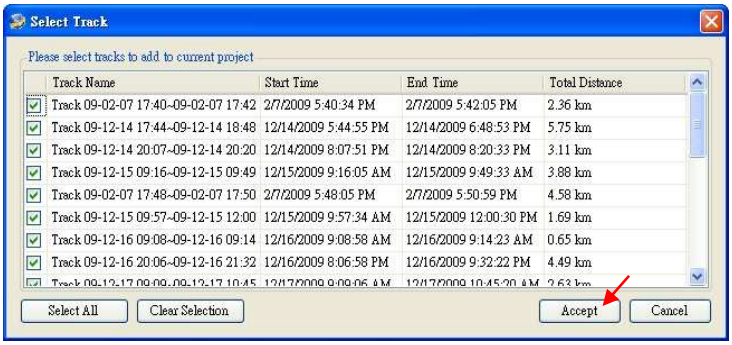
You can *disable Auto Shutdown* to keep *mini*Homer always on until turned off manually by press and hold Power/Mode



key for 2~3 seconds.

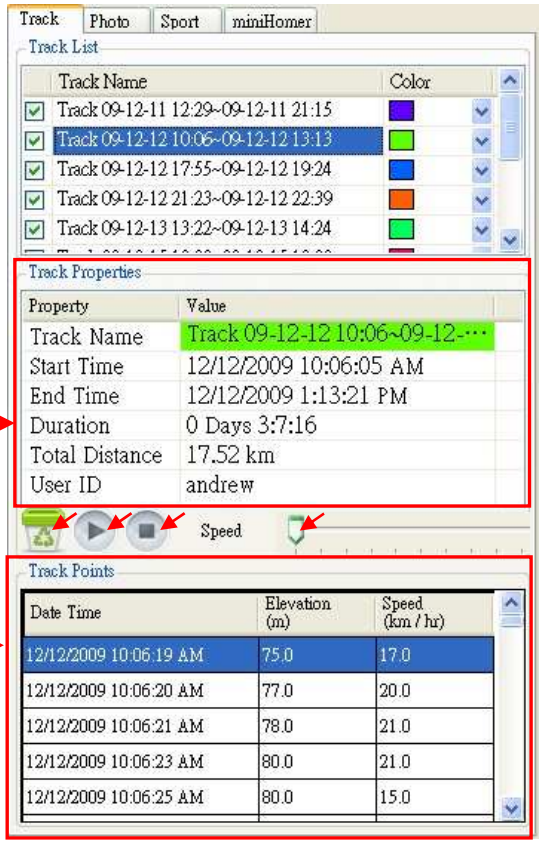
Download and Display GPS Logger Data

1. To download logged data from *mini*Homer, simply click on *Download Datalog* button.



2. You can select tracks to add to the current project, click on *Accept* button, and you'll see the tracks displayed on the map. Display of the tracks can be turned off by un-checking the loaded tracks.

You can select a track by clicking on the track name highlighting it, and click on *Play* icon to playback your traveled path, slide *Speed* bar to adjust the playback speed, or click on *Stop* icon to stop the playback.



3. You can select a track by clicking on the track name highlighting it, and click on *Trash Can* icon to delete the track.

4. You can easily check the details of a selected track.

5. You can select a track point and a description window and an arrow indicating the track point will show up on the map.

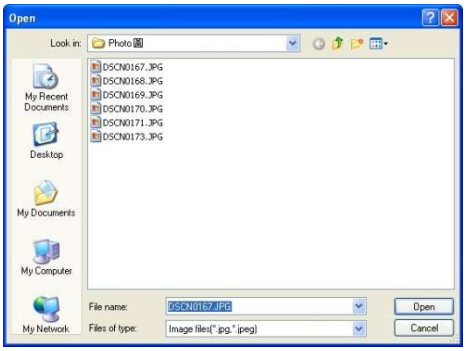
Sporting Statistics

1. After downloading GPS logger data, you can select *Sport* page and choose a track to analyze your sporting records (speed, elevation, time, and distance) plotted in a chart. This information can help you find out what to improve and adjust your training program to achieve better results.

2. You can zoom in or zoom out by clicking on *Zoom* buttons. When zoomed in to see a portion of the plot, you can slide the time bar at the bottom to move foreward or backward.

Import Photo

1. To import photos from your camera or files, simply click on *Import Photo* button.

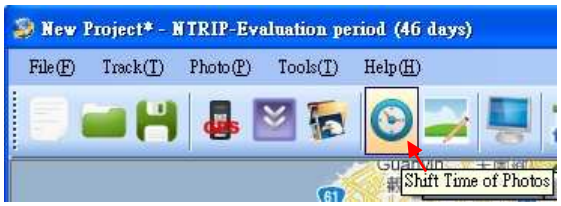


2. You can select photos to import. Assume you have previously downloaded GPS logger data from the *mini*Homer (recorded during a photo-taking trip) you'll see photos represented by a camera icon on displayed tracks showing on the map.

3. By selecting a photo from the upper right window, you'll see a description window showing where the photo was taken on the map.

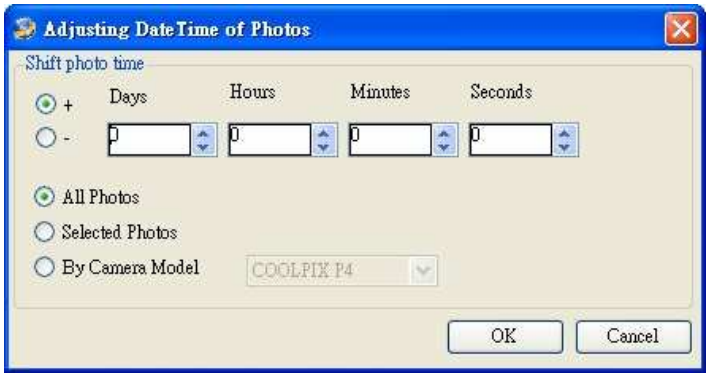
4. You can select a photo and click on a *rotate* button to turn the photo clockwise or counterclockwise.

Shift Time of Photos



To know where your photo was taken require the time of your camera and *mini*Homer not be too different apart. By time-matching the time-stamped photo and the time information in the GPS logger data, the location where the photo was taken is then determined.

If your camera has incorrect shifted time, you can click on *Shift Time of Photos* button to correct the time-stamp of the photos and to display them correctly on the map.

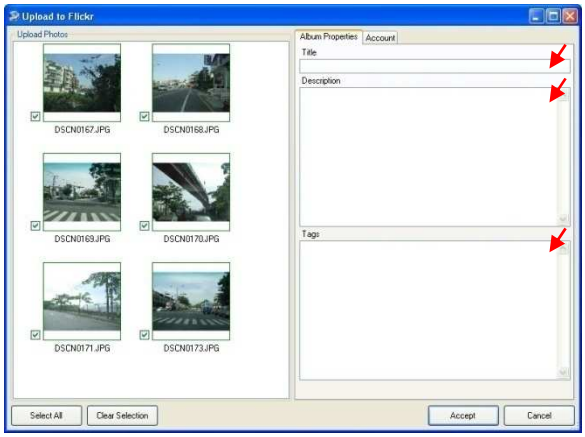


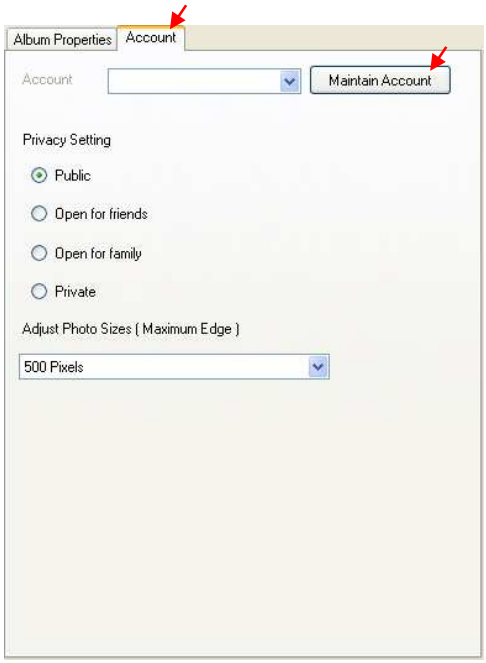
Write Back GPS EXIF

After downloading GPS logger data and photos, you can add coordinates to the photos by clicking on *Write Back GPS EXIF* button to add location coordinates to the photos.

Upload to Flickr

1. You can upload photos to Flickr to share with others by clicking on *Upload to Flickr* button.





2. You can give a title to the album, write something to describe your album in *Description* column, and give some key words to be searched in *Tags* column.

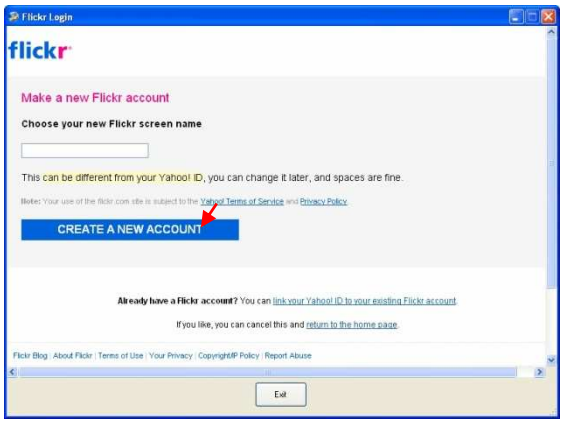
3. You can select *Account* page and click on *Maintain Account* button to add or delete an account.

4. You can click on *Add New* button to add a new Flickr account and click on *OK* button to go to next step.

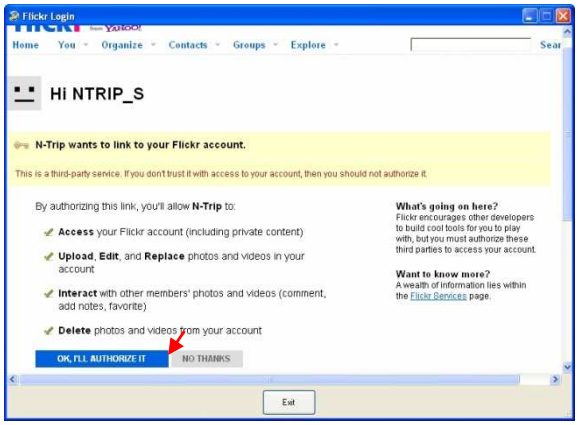
Security Alert
You are about to view pages over a secure connection.
Any information you exchange with this site cannot be viewed by anyone else on the Web.
In the future, do not show this warning
OK
More Info

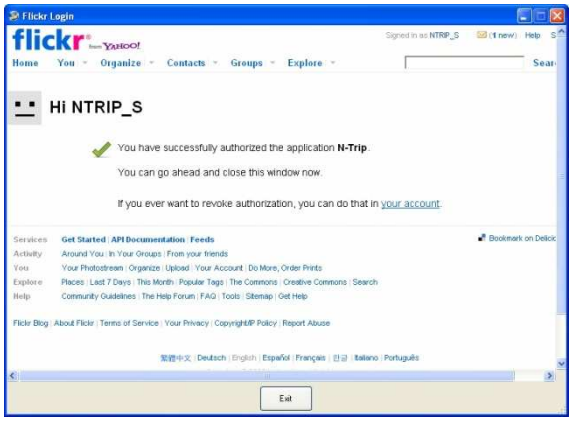
5. You have to log in with a Yahoo! account first and you'll see a web page on Flickr for applying a new account.

Flickr Login
YAHOO!
Welcome to Yahoo!
Enjoy all the benefits of Yahoo! Flickr.
Access all your digital images in one place.
Show off your favorite photos to the world.
Share photos with your friends and family - it's easy!
Get all the best with one Yahoo! ID.
Your Yahoo! ID gives you access to powerful communications tools like mail and instant messaging, security features like email AntiVirus and Pop-Up Blocker, and favorites like online photos and music — all for free.
Don't have a Yahoo! ID?
Signing up is easy.
Sign up for Yahoo!
Already have a Yahoo! ID?
Sign in.
Are you protected?
Create your sign-in seal.
(Why?)
Yahoo! ID:
Password:
Security Alert: Protect your account.
Upgrade your Adobe Flash Player.
Exit

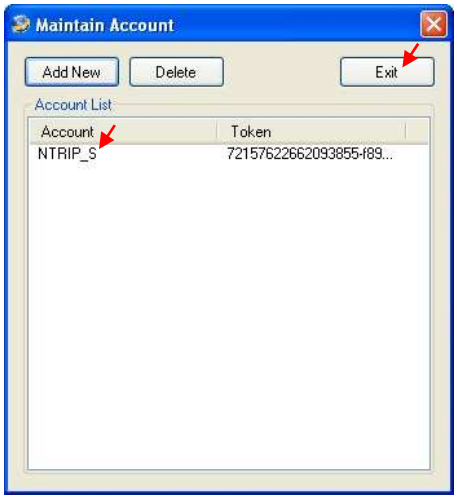

Flickr Login
flickr
Make a new Flickr account
Choose your new Flickr screen name
This can be different from your Yahoo! ID, you can change it later, and spaces are fine.
CREATE A NEW ACCOUNT
Already have a Flickr account? You can link your Yahoo! ID to your existing Flickr account.
If you like, you can cancel this and return to the home page.
Exit

6. You can give a name to your account and click on *CREATE A NEW ACCOUNT* button.


Flickr Login
Home
You
Organize
Contacts
Groups
Explore
Hi NTRIP_S
N-Trip wants to link to your Flickr account.
This is a third-party service. If you don't trust it with access to your account, then you should not authorize it.
By authorizing this link, you'll allow N-Trip to:
Access your Flickr account (including private content)
Upload, Edit, and Replace photos and videos in your account
Interact with other members' photos and videos (comment, add notes, favorite)
Delete photos and videos from your account
What's going on here?
Flickr encourages other developers to build cool tools for you to play with, but you must authorize these third parties to access your account.
Want to know more?
A wealth of information lies within the Flickr Services page.
OK, I'LL AUTHORIZE IT
NO THANKS
Exit

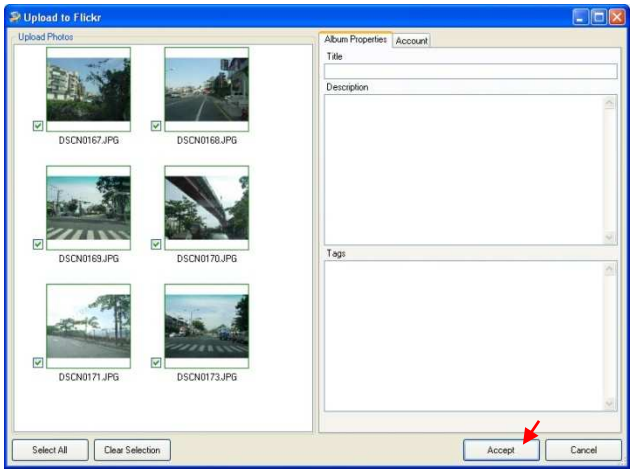


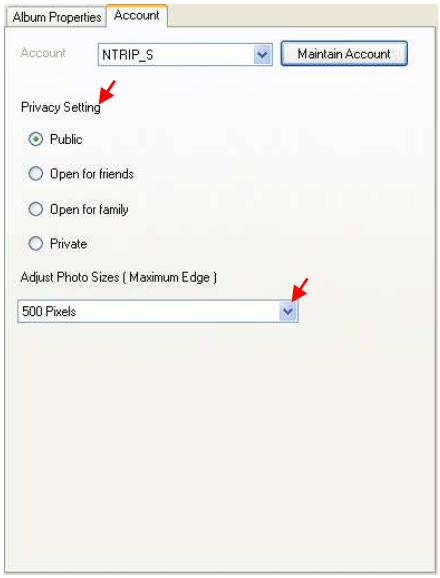
7. Clicking on "*OK, I'll AUTHORIZE IT*" button to enable further uploading process, and you'll see successful information.



8. After closing the web page, you'll see your new Flickr account has been added.

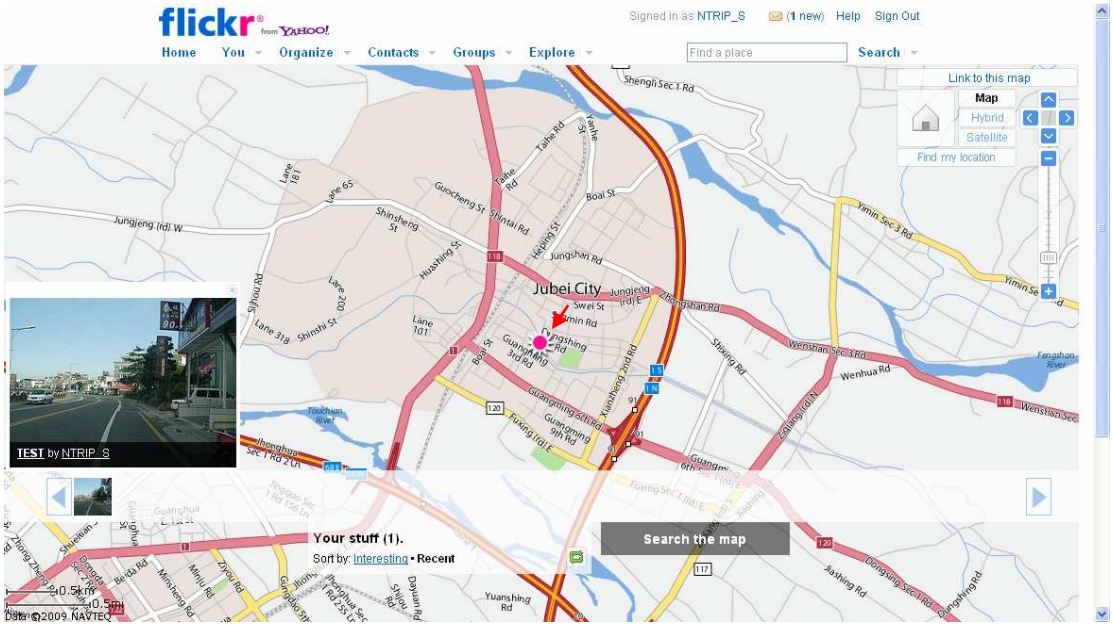
9. After clicking on *Exit* button, you can select privacy setting of your album and adjust photo sizes by clicking on pull-down menu.





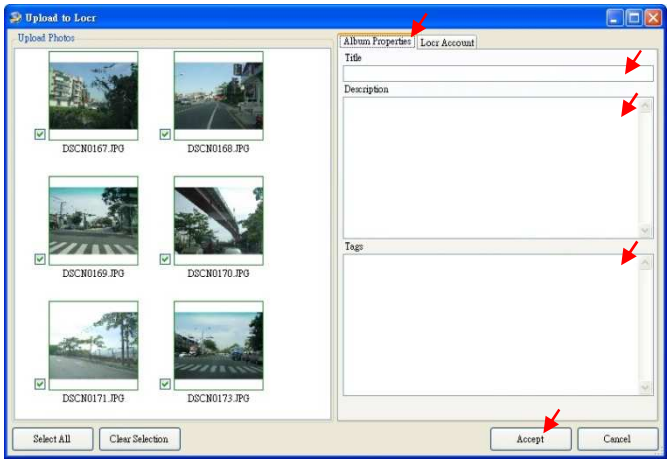
10. You can click on *Write Back GPS Exif* button to add coordinates to photos first and upload to Flickr by clicking on *Accept* button.

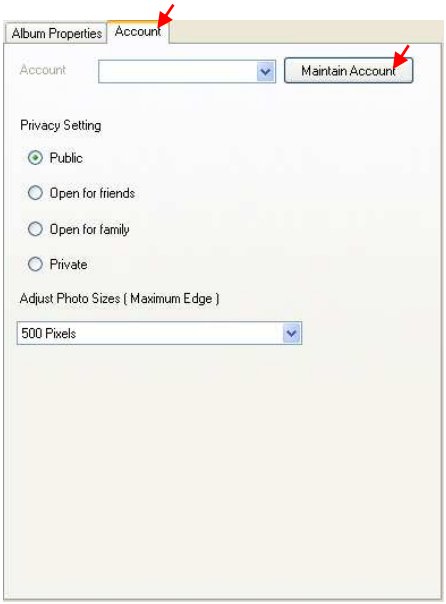
11. After login on Flickr website, you'll see uploaded photos shown in a map and you can share the photos with friends.



Upload to Locr

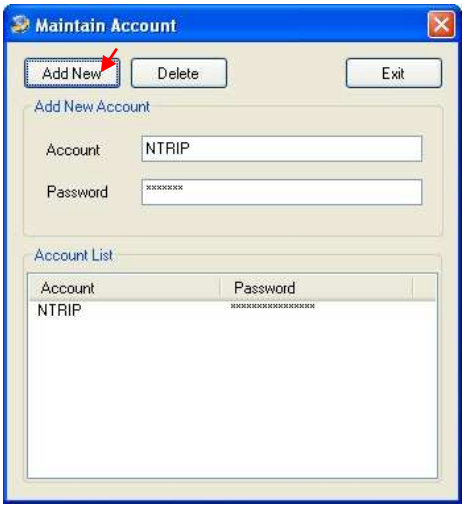
1. You can upload photos to Locr to share with others by clicking on *Upload to Locr* button.





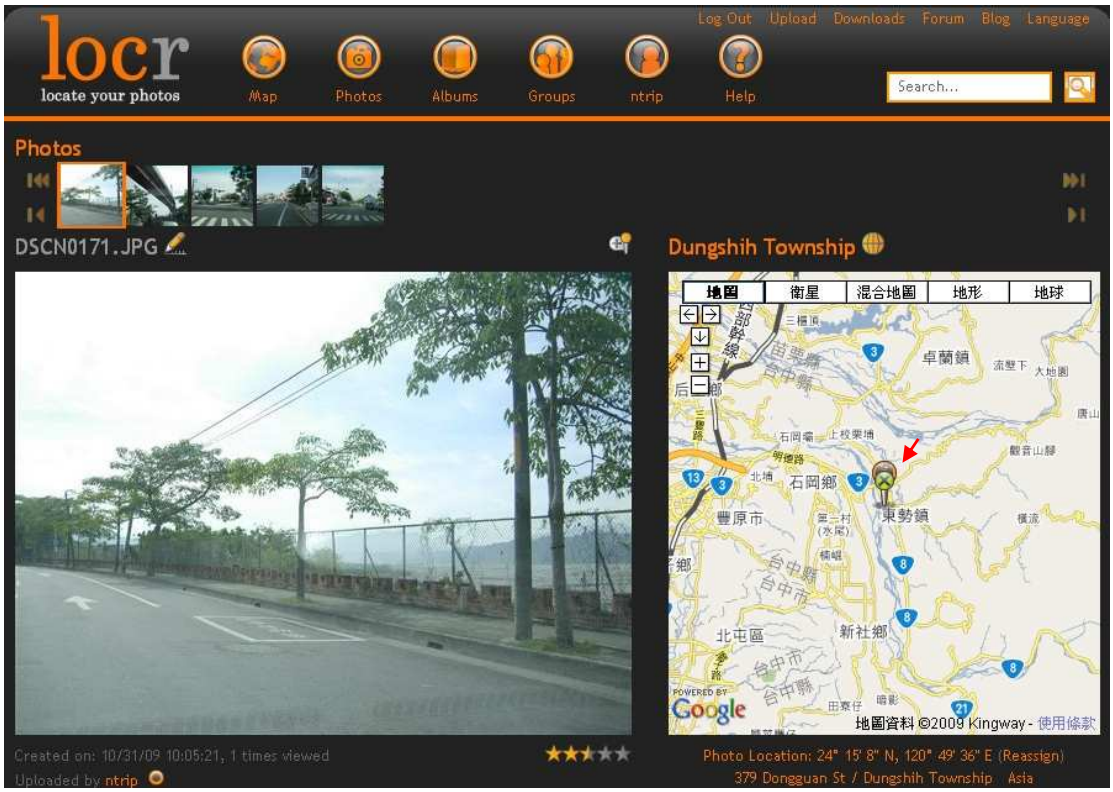
2. You can give a title to the album, write something to describe your album in *Description* column, and give some key words to be searched in *Tags* column.

3. You can select *Account* page and click on *Maintain Account* button to add or delete an account.



4. You have to apply for a Locr account on Locr's web page first and store name and password of your Locr account in *Account list* by clicking on *Add New* button.

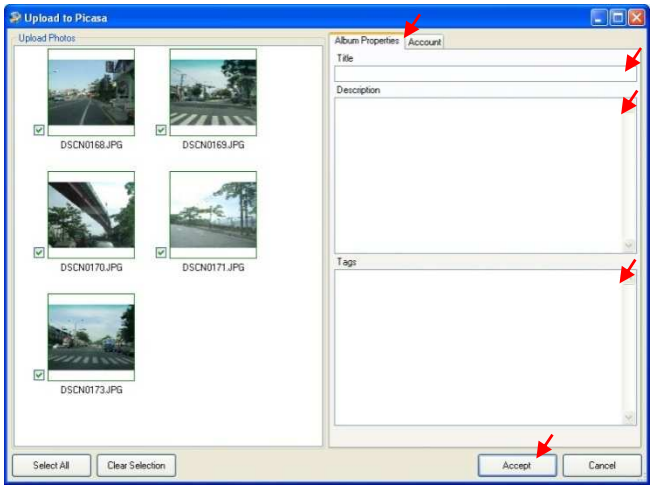
5. You can click on *Write Back GPS Exif* button to add coordinates to photos first and upload to Locr by clicking *Accept* button.

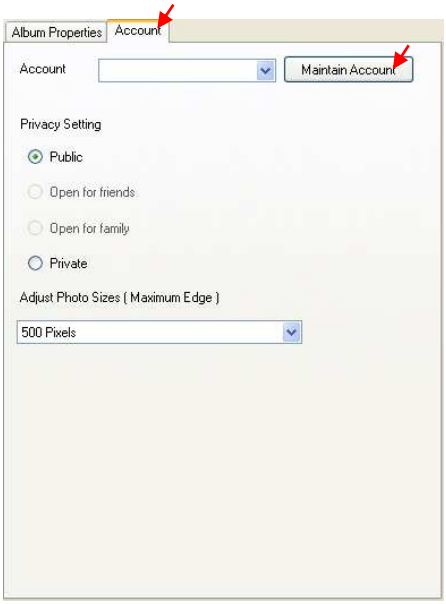

locr
locate your photos
Log Out Upload Downloads Forum Blog Language
Map Photos Albums Groups ntrip Help
Search...
Photos
DSCN0171.JPG
Dungshih Township
地圖 衛星 混合地圖 地形 地球
Created on: 10/31/09 10:05:21, 1 times viewed
Uploaded by ntrip
Photo Location: 24° 15' 8" N, 120° 49' 36" E (Reassign)
379 Dongguan St / Dungshih Township Asia
地圖資料 ©2009 Kingway - 使用條款

6. You'll see uploaded photos shown on a map on Locr's web page and you can share the photos with friends.

Upload to Picasa

1. You can upload photos to Picasa to share with others by clicking on *Upload to Picasa* button.





2. You **must** give a title to the album, write something to describe your album in *Description* column, and give some key words to be searched in *Tags* column.

3. You can select *Account* page and click on *Maintain Account* button to add or delete an account.

4. You have to apply for a Picasa account on Google's web page first and store name and password of your Picasa account in *Account list* by clicking on *Add New* button.

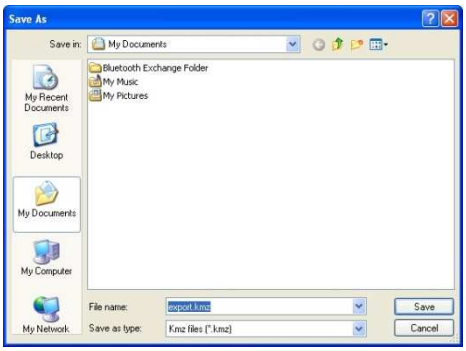
5. You can click on *Write Back GPS EXIF* button to add coordinates to photos first and upload to Picasa by clicking *Accept* button.

6. You'll see uploaded photos shown on a map on Picasa's web page and you can share the photos with friends.

Export to KMZ

1. You can export logger and image data in KMZ format to be displayed in Google Earth by clicking on *Export to KMZ* button.

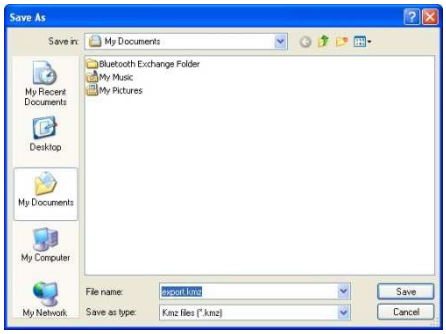
2. You can select a folder to save the photos in KMZ format.



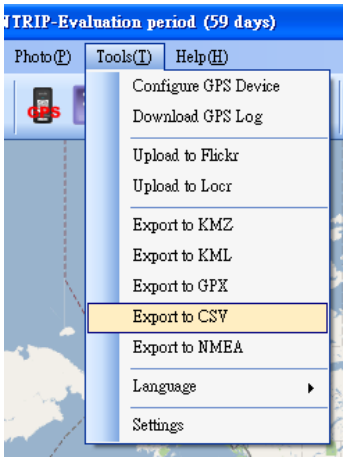
Export to GPX

1. You can export logger data in GPX format by clicking on *Export to GPX* button.

2. You can select a folder to save the photos in GPX format.



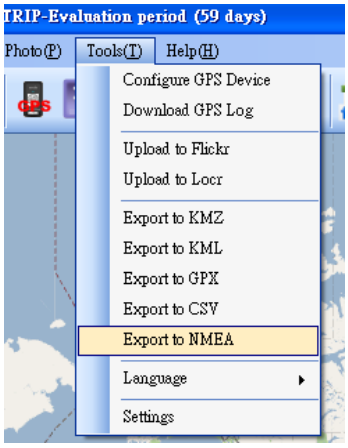
Export to CSV



You can export logger data in Excel CSV format by selecting *Export to CSV* from the Tools pull-down menu. Meaning of each exported column is:

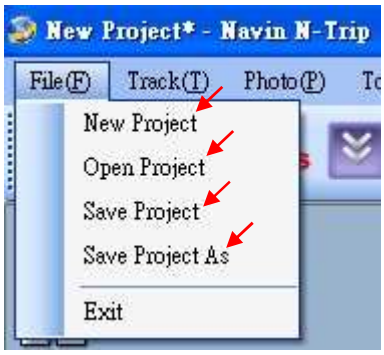
Record Number, Track ID, UTC Date, UTC Time, Local Date, Local Time , Latitude in degree, N/S, Longitude in degree, E/W, Altitude in meter, Speed in km/hr.

Export to NMEA



You can export logger data in GPS NMEA format by selecting *Export to NMEA* from the Tools pull-down menu. GGA and RMC message is generated.

File

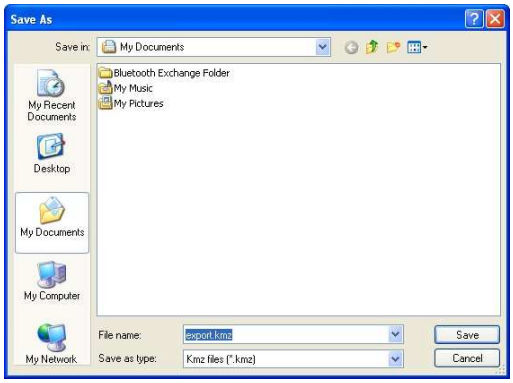


1. You can start a new project to process different GPS logger data and photos by clicking on *New Project* button.

2. You can open an existing project by clicking on *Open Project* button.

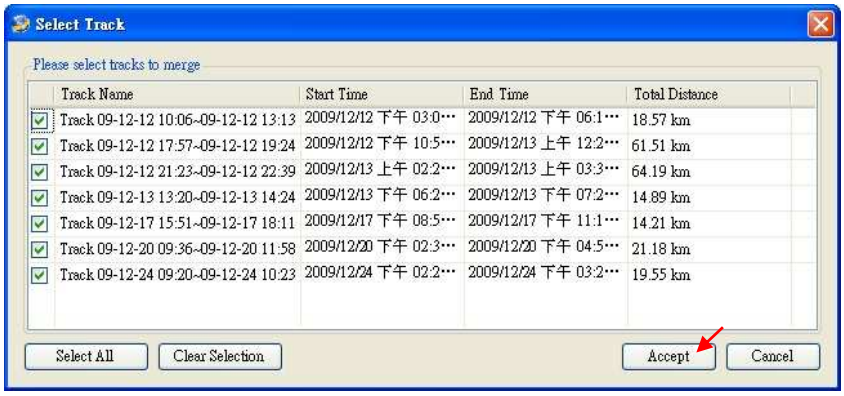
3. You can click on *Save Project* button to save photos and tracks to current project.

4. You can save current project to another file by clicking on *Save Project As* button.



Track – Merge Track / Remove Selected Track

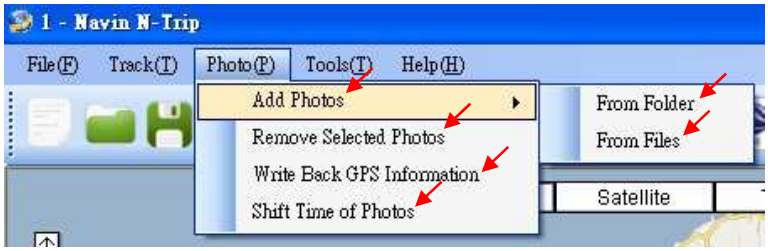
1. You can merge tracks by clicking on *Merge Track* button.



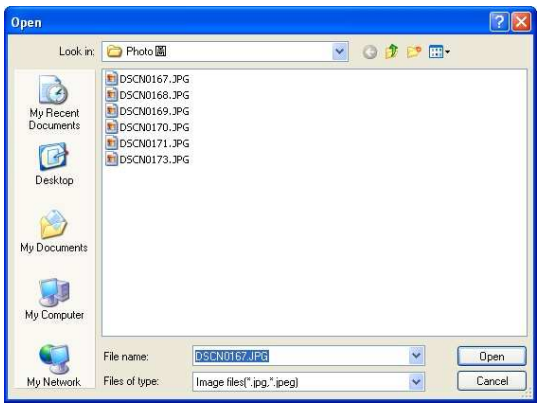
2. You can select tracks to merge by checking the selection box and click on *Accept* button, and you'll see a merged track displayed on the map.

3. You can remove a selected track by clicking on *Remove Selected Track* button, and you'll see the selected track disappear.

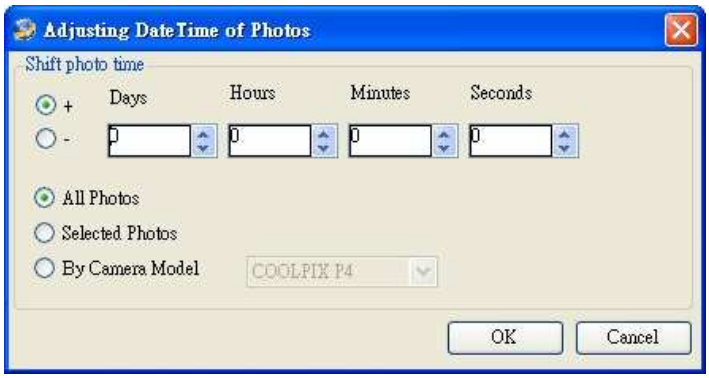
Photo



1. You can add photos from folder or files by clicking on *From Folder* or *From files* button.



2. You can remove selected photos by clicking on *Remove Selected Photos* button.
3. After downloading GPS logger data and photos, you can add coordinates to the photos by clicking on *Write Back GPS Exif* button to combine the photos with location coordinate information.
4. If your photos are taken with incorrect time of a camera, you can click on *Shift Photo Time* button to correct the time stamp of the photos and to display them correctly on the map.



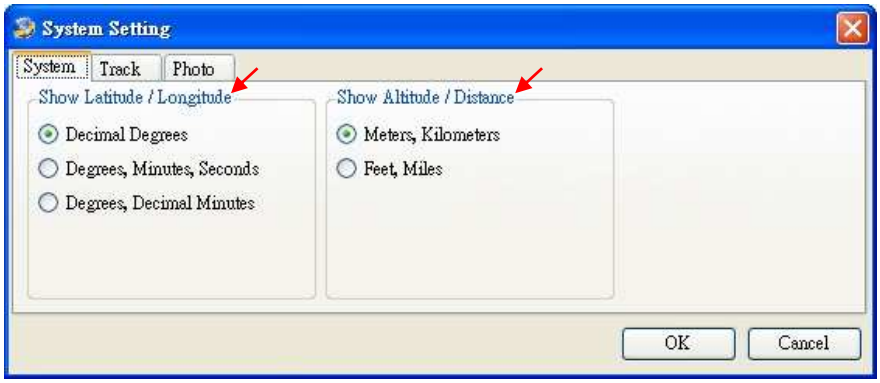
Tools – Connect GPS / Language / Settings

1. Some functions are already introduced previously.

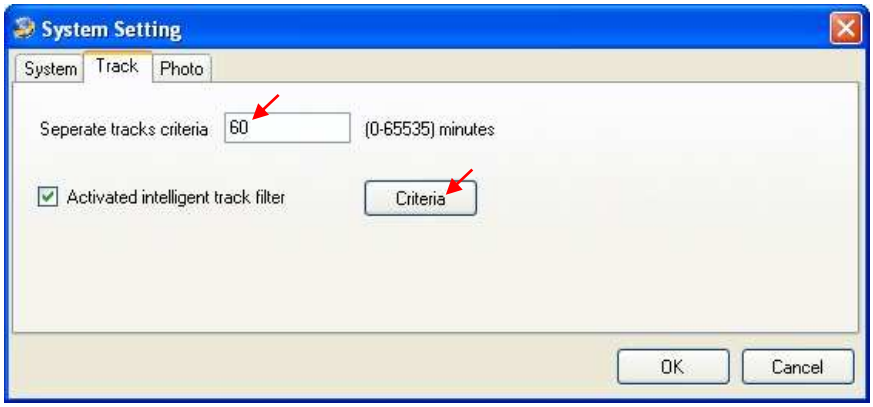
2. You can select English, Traditional Chinese, Simplified Chinese, Japanese, German, Italian, French, Spanish, Portuguese, Czech, Dutch, or Russian by clicking on *Language* button.

3. You can click on *Connect GPS* button to show your current position on the map in realtime if *mini*Homer has fixed your location.

4. You can change system settings by clicking on *System Settings* button.

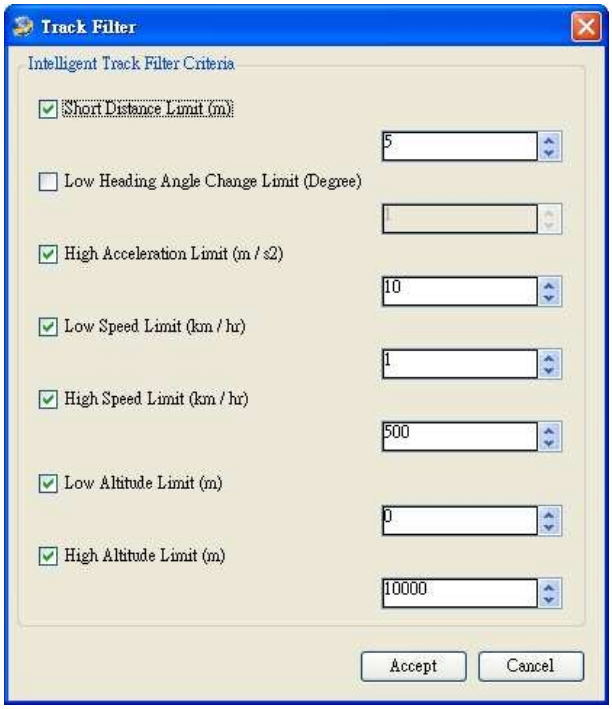


5. You can change units for showing latitude/longitude or altitude/distance.



6. The downloaded logger data will be broken into different tracks if the time difference between track points exceeds the *Separate Track Criteria* value.

7. You can activate or de-activate *Intelligent Track Filter* and change the *Track Filter Criteria* settings.



8. You can adjust *Intelligent Track Filter Criteria* to help remove some bad points or excess points that are not needed.

    a. Short Distance Limit: If distance of a point from an earlier point is below this number, it is filtered out. The filtered result will have points separated by at least this *Short Distance Limit* number.

b. Low Heading Angle Change Limit: If heading change from an earlier point is below this number, it is filtered out. The filtered result will have points having heading change by at least this *Low Heading Angle Change Limit* number.

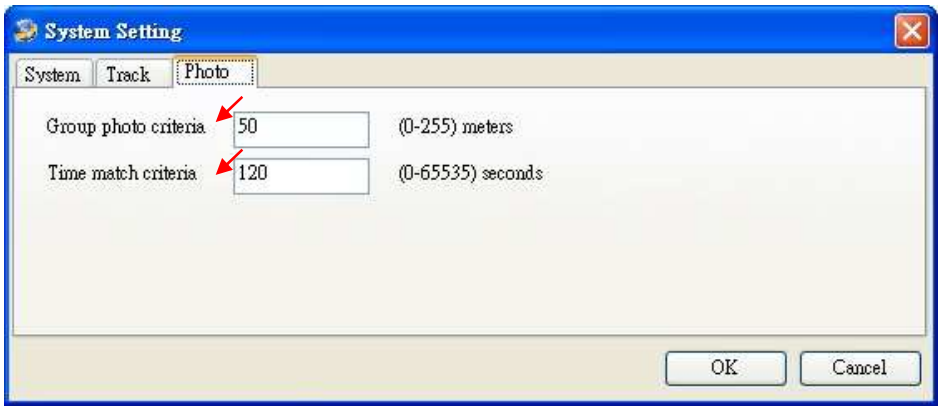
c. High Acceleration Limit: If a point has acceleration higher than this number, it is filtered out.

d. Low Speed Limit: If a point has speed below this number, it is filtered out.

e. High Speed Limit: If a point has speed above this number, it is filtered out.

f. Low Altitude Limit: If a point has altitude below this number, it is filtered out.

g. High Altitude Limit: If a point has altitude above this number, it is filtered out.



9. You can group photos together in clusters to have better viewing result on the map by adjusting the grouping criteria.

10. First, location of the photo is determined by time matching the time stamp on the photo and the time information associated with each point of the logger data according to the *Time Match Criteria*. A photo is matched to a point having the least time difference; if no point is found to be within the set *Time Match Criteria* number, then the photo will not be used to display on map.

11. The photos are then processed sequentially in alphabetical orders for grouping. A photo is put in a same grouped if distance to the first photo of the group is below the set *Group Photo Criteria* number. If no existing group can be matched for the photo, it is put into another new group and used as the first photo of the group.

Map
Satellite
Terrain
DSCN0167.JPG
10/31/2009 8:45:17 AM
DSCN0168.JPG
Jhongshan District
中山區
Taipei City
台北市
Keelung City
基隆市
Taipei County
台北縣
Taoyuan County
桃園縣
Hsinchu City
新竹市
赤柯山
Hsinchu County
新竹縣
Yilan County
宜蘭縣
Wujie
五結鄉
Su-ao
蘇澳鎮
Miaoli County
苗栗縣
雪山
南湖大山
東部幹線
Google
search the map
Search
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